



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,504	07/08/2003	Philippe Bazot	FR920020030US1	9216
23550	7590	08/21/2008		
HOFFMAN WARNICK LLC 75 STATE STREET 14TH FLOOR ALBANY, NY 12207			EXAMINER SURVILLO, OLEG	
			ART UNIT 2142	PAPER NUMBER
			NOTIFICATION DATE 08/21/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hwdpatents.com

Office Action Summary	Application No.	Applicant(s)	
	10/615,504	BAZOT ET AL.	
	Examiner	Art Unit	
	OLEG SURVILLO	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Claims 1, 2, and 4-11 remain pending in the application. Claims 1 and 4 are currently amended. Claims 3 and 12 are canceled. No new claims have been added.

Response to Arguments

2. With regard to the Applicants' remarks dated June 2, 2008:

regarding the rejection of claim 1 under 35 U.S.C. 103(a) as being unpatentable over Choquier in view of Agarwalla and in further view of Coughlin, Applicants' arguments have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made in view of the newly discovered references. Applicants argued that: *"the references fail to teach or suggest, inter alia, the claimed context table, "wherein the context table contains at least one entry comprising: a server name comprising a hostname of a content server as contained in an URL; an IP address of the content server; one of the URLs associated with a name of the content server; an "availability" of the URL; a last received date and time of a last received service availability token from the content server; a request sent flag indicating whether an availability request has already been sent, wherein the request sent flag is reset every time a response is received; a number of retries comprising a number of times a service availability request has been sent; and a date and time of a last sent availability request.""*. This argument is persuasive.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 2, and 4-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, it is unclear whether *an availability request* (in the limitation of: a request sent flag indicating whether an availability request has already been sent) is a service availability request, such as the one recited in the limitation of: appending a service availability request to said service request. It is also unclear whether *a last sent availability request* (in the limitation of: a date and time of *a last sent availability request*) is a last sent service availability request. Applicants are advised to use consistent terminology when referring to the same element in the claim.

As to claim 1, *a name of the content server* (in the limitation of: one of the URLs associated with a name of the content server) is ambiguous because the limitation of: a server name comprising a hostname of a content server as contained in an URL, has already specified that a server name is a hostname of a content server. Therefore, Applicants are advised to amend the claim to read: one of the URLs associated with the hostname of the content server. Such amendment would overcome the rejection.

Claims 2 and 4-11 are rejected on the same grounds as being dependent from claim 1 and therefore incorporating all the limitations of the independent claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choquier et al. (US Patent No.: 5,774,668) in view of Agarwalla et al. (US Patent No.: 6,985,936 B2) in view of Coughlin (US 2004/0024861 A1) in view of Yu et al. (US 2005/0193096 A1) in view of Hurvig (US Patent No.: 5,867,652) and in further view of Minami et al. (US 2007/0253430 A1).

As to claim 1, Choquier shows a method for ensuring the availability of a service proposed by a service provider in a data transmission system [load balancing] (abstract) including at least one user workstation connected to the Internet network [client microcomputers (102)] (Fig. 1), a plurality of content servers able to furnish services provided by service providers [application servers (120)] in response to service requests from said user workstation (col. 2 lines 43-47), and a proxy server interconnected between said Internet network and said content servers [a Gateway microcomputer (126)] for receiving said service requests from said user workstation and transmitting each one to a content server able to provide the requested service (col. 2 lines 43-52);

said method including the following steps when said proxy server receives a service request,

looking in a context table [a service map (136)] in the proxy server in order to determine the content server able to provide the requested service (col. 8, lines 7-9). It is inherent for the service request to be defined by URL since the communication between client and content server via proxy is established using TCP/IP protocol and HTTP being a request/response protocol between client and content server (col. 5, lines 5-9. Also see Agarwalla reference at col. 9 lines 1-16 and Fig. 7A),

sending said service request from said proxy server to said determined content server (col. 8, lines 21-24 and 32-35),

sending said reply from said determined content server to said proxy server (col. 8, lines 25-27 and 32-35),

updating said context table in said proxy server by using information contained in said service availability token [local map (140)] (col. 10, lines 45-54 and 66-67; col. 11, lines 1-12), and

sending said reply [messages from said determined content server] to said user workstation [via proxy server] (col. 8, lines 25-27 and 32-35),

wherein the context table contains at least one entry comprising:

an “availability” of the URL [“availability” as a parameter for the respective server inherently associated with the URL specified in the request] (col. 10, lines 66-67; col. 11, lines 1-7).

Choquier does not show that service availability request is appended to said service request from said client, the service availability request comprising a request for an availability of the determined content server [because proxy server is configured to

Art Unit: 2142

automatically request service availability at predetermined time intervals] (col. 10, lines 49-54). Choquier also does not show that service availability token is appended to reply from said content server, the service availability token containing at least a percentage of availability of the determined content server [because service map dispatcher (144) is configured to automatically request service availability tokens from content servers] (col. 10, lines 42-45), as well as removing said service availability token from said reply upon reception thereof by said proxy server [since it was not appended before, as discussed just above]. Choquier further does not show at least one entry of the context table further comprising: a server name comprising a hostname of a content server as contained in an URL; an IP address of the content server; one of the URLs associated with a name of the content server; a last received date and time of a last received service availability token from the content server; a request sent flag indicating whether an availability request has already been sent, wherein the request sent flag is reset every time a response is received; a number of retries comprising a number of times a service availability request has been sent; and a date and time of a last sent availability request.

Agarwalla shows that the service availability request [a content distribution flag] (col. 8 lines 23-30) is appended to service request from the user workstation before sending said service request from said proxy server [caching system] to said determined content server [augmenting HTTP GET request message with an HTTP header containing the "service availability request"] (col. 8 lines 43-47);

appending a service availability token [content distribution information] (col. 10 lines 13-15) to the reply provided by said determined content server before sending said reply from said determined content server to said proxy server [caching system] (col. 9 lines 64-67 and col. 10 lines 1-4);

removing said service availability token from said reply upon reception thereof by said proxy server (col. 12 lines 38-48); and

updating said context table [file name-to-URL mapping table] (Fig. 6) in said proxy server before sending said reply to said user workstation by using information contained in said service availability token (col. 10 lines 30-33; col. 12 lines 38-58; Fig. 5), the context table containing an entry corresponding to a Uniform Resource Locator (URL) defined in said service request (Figs. 4, 6, and 7A; col. 9 lines 1-16).

Agarwalla further shows at least one entry of the context table further comprising a server name comprising a hostname of a content server as contained in an URL and one of the URLs associated with a name of the content server (Figs. 4, 6, and 7A; col. 9 lines 1-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier by appending a service availability request to said service request, appending a service availability token to the reply, and removing said service availability token from the reply upon reception thereof by said proxy server, as taught by Agarwalla, instead of or in addition to periodically requesting service availability tokens from content servers, as taught by Choquier, in order to efficiently respond to service availability updates from the content servers that are

currently serving service requests and therefore are susceptible to frequent changes in availability.

Choquier in view of Agarwalla does not explicitly show the service availability request comprising a request for an availability of the determined content server and the service availability token containing at least a percentage of availability of the determined content server. Choquier in view of Agarwalla further does not show at least one entry of the context table further comprising: an IP address of the content server; a last received date and time of a last received service availability token from the content server; a request sent flag indicating whether an availability request has already been sent, wherein the request sent flag is reset every time a response is received; a number of retries comprising a number of times a service availability request has been sent; and a date and time of a last sent availability request.

Coughlin shows:

a request for an availability of the determined content server [a request to a server, in response to which the server responds with a message containing server metrics (characteristics)] (par. [0031]-[0032]), and

the service availability token containing at least a percentage of availability of the determined content server [reply message from the server containing server characteristics] (par. [0032], [0035], [0040]).

Coughlin further shows at least one entry of the context table [a complete list (232), an active list (234), and a test list (236)] (Fig. 4; par. [0062]) further comprising an IP address of the content server (par. [0024] lines 7-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier in view of Agarwalla by having the service availability request of Agarwalla comprise a request for an availability of the determined content server and the service availability token of Agarwalla containing at least a percentage of availability of the determined content server, as taught by Coughlin, in order to include operating characteristics of the server in one or more headers of the message (par. [0031] in Coughlin). It would also have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier in view of Agarwalla by having at least one entry of the context table further comprising an IP address of the content server in order to uniquely identify the content server capable of serving the request.

Choquier in view of Agarwalla and Coughlin further does not show at least one entry of the context table further comprising: a last received date and time of a last received service availability token from the content server; a request sent flag indicating whether an availability request has already been sent, wherein the request sent flag is reset every time a response is received; a number of retries comprising a number of times a service availability request has been sent; and a date and time of a last sent availability request.

Yu shows that at least one entry of the context table [document access log data (25)] (Fig. 2) further comprises a last received date and time of a last received [response] from the content server and a date and time of a last sent request (par. [0024] lines 20-27).

It would also have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier in view of Agarwalla and Coughlin by having at least one entry of the context table further comprising a last received date and time of a last received service availability token (which is appended to the response) from the content server and a date and time of a last sent availability request (which is appended to the request) in order to keep a log of date and time when requests were sent out and responses were received (par. [0024] lines 20-27 in Yu).

Hurvig shows that at least one entry of the context table [status flag array (24)] (Fig. 3) further comprises a request sent flag [status bit] indicating whether a request has already been sent, wherein the request sent flag is reset every time a response is received (col. 6 line 61 to col. 7 line 9).

It would also have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier in view of Agarwalla, Coughlin and Yu by having at least one entry of the context table further comprising a request sent flag indicating whether an availability request (which is appended to the request) has already been sent, wherein the request sent flag is reset every time a response is received in order to keep a log of outstanding requests (col. 6 line 61 to col. 7 line 9 in Hurvig).

Minami shows that at least one entry of the context table further comprises a number of retries comprising a number of times a request has been sent (par. [0282] lines 7-17).

It would also have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier in view of Agarwalla, Coughlin, Yu, and Hurvig by having at least one entry of the context table further comprising a number of retries comprising a number of times a service availability request (which is appended to the request) has been sent in order to determine at which point to abandon retransmitting the requests for which no reply was received (par. [0282] lines 7-17 in Minami).

As to claim 2, Choquier in view of Agarwalla shows that said context table includes a plurality of entries (400) corresponding to several URLs [service names] associated with the same server name [where URLs refer to MAIL and BBS services that reside on the same server (120e)] (col. 9, lines 27-30 in Choquier; Figs. 4, 6, and 7A; col. 9 lines 1-16 in Agarwalla).

As to claim 4, Choquier shows that said service request is rejected if the parameter ["minimum throughput requirement"] in said context table [service priority table (1220)] is defined as not available.

Choquier does not expressly show that service request is rejected if the parameter "availability" is defined as not available.

Examiner takes Official notice that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier to define the parameter "availability" as not available in order to specify that the parameter

“availability” of zero indicates that the content server is heavily loaded and as a result, not available (col. 11, lines 6-7 in Choquier).

As to claim 5, Choquier shows that said context table includes multiple entries for the same server name (as discussed per claim 2), the entry with the parameter “availability” [CPU LOAD] being the highest one selected in the step of looking for an entry [at the top of the local map of the service map] (Fig. 4, element (140)).

As to claim 6, Choquier shows that said context table contains a plurality of parameters (Fig. 4, CPU LOAD, CPU INDEX) associated with said service availability token received from content servers, these parameters being updated in the context server upon reception of service availability token (col. 10, lines 49-54). It is inherent that the parameters contained in the context table and associated with the service availability request are the same as the parameters in the service availability token since the service availability token returns the parameters requested.

As to claim 7, Choquier shows refreshing the entry of said context table by taking into account variables [CPU LOAD and CPU INDEX values] which are a function of parameters [“availability” comprising FREE CPU and AVAILABLE CPU] included in said context table (col. 14, lines 60-67; col. 15, lines 1-3).

As to claim 8, Choquier shows that the context table contains “availability” as a parameter and serves to inform of change in state of any content server in the system (col. 11, lines 46-47).

Choquier does not show that parameter “availability” is set to “not available” when number of retries is equal to a predetermined maximum number.

Minami shows that the attempts to send further requests are abandoned when said number of retries is equal to a predetermined maximum number (par. [0024] lines 7-17).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier in view of Agarwalla, Coughlin, Yu, and Hurvig by setting the parameter “availability” as “not available” when number of retries is equal to a predetermined maximum number in order to specify that the parameter “availability” of zero indicates that the content server is heavily loaded and as a result, not available (col. 11, lines 6-7 in Choquier).

As to claim 9, Choquier in view of Agarwalla shows that said service request [content request (500)] (Fig. 5 in Agarwalla) is written in HyperText Markup Language (HTML) (Fig. 7A in Agarwalla) and said service availability request is contained is contained in a header of HTTP service request (Fig. 7A, element (714) in Agarwalla).

As to claim 10, Choquier in view of Agarwalla shows that said service availability token is in Extensible Markup Language (XML) format (Fig. 9F, col. 11 lines 22-36 in Agarwalla).

As to claim 11, Choquier shows that said context table is updated when receiving service availability token from said content server (col. 10, lines 45-54) and the parameter "availability" is changed if necessary [by overwriting its old value with the updated value, based on the last received token] (col. 10, lines 54-57; col. 11, lines 10-12).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLEG SURVILLO whose telephone number is (571)272-9691. The examiner can normally be reached on M-Th 8:30am - 6:00pm; F 8:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Caldwell/
Supervisory Patent Examiner, Art
Unit 2142

Examiner: Oleg Survillo
Phone: 571-272-9691

